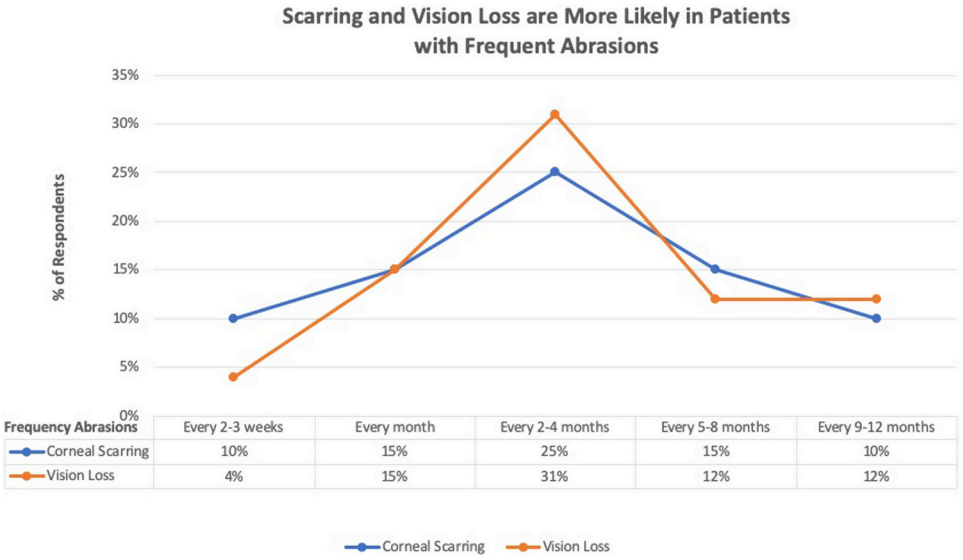

Fig 1. Line graph showing the percentage of patients with corneal scarring and vision loss (*y*-axis) according to the frequency of abrasions (*x*-axis). The percentages of patients with scarring and vision loss both peak in the group with abrasions occurring every 2 to 4 months.

Floating Hospital for Children at Tufts Medical Center, Boston, Massachusetts.[c]

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Cutaneous type of pemphigus vulgaris

To the Editor: Pemphigus vulgaris (PV) is an autoimmune blistering skin disease that mainly involves oral mucosa. Rarely, patients with PV show no mucous membrane involvement despite the existence of circulating autoantibodies against both desmogleins (Dsg1 and Dsg3) and suprabasal acantholysis on histologic analysis[1]; however, the epidemiology and characteristics of this cutaneous type of pemphigus (cPV) have not been extensively characterized.

To understand the characteristics of patients with cPV, after institutional review board approval, we consecutively evaluated patients with a definite diagnosis of PV for a period of 2 years. The diagnosis of PV was made by clinical presentation and confirmed by the presence of suprabasal cleft and acantholysis[2] in histology, as well as detection of intercellular epithelial IgG and/or C3 deposition by direct immunofluorescence. Regardless of previous treatment, we evaluated patients who had only cPV for further analysis. The new patients were followed up for at least 6 months; the median follow-up duration was 20 months. Patients with either past or present mucosal involvement or patients who met the clinical and pathologic criteria for pemphigus foliaceus were excluded.

From a total of 560 patients with PV, we identified 30 (5.3%) patients with cPV. The mean age at diagnosis was 49.9 years. There were 19 men (64%) and 11 women (36%). Of the patients with cPV, 11 patients had new cases of cPV that was

diagnosed during the study period, and 19 patients had known cases and came for follow-up (Supplemental Fig 1; available at https://doi.org/10.17632/9cmt5p4cgs.2).

All of the patients presented with skin lesions similar to those of the mucocutaneous type of PV. Previously treated patients with positive serology results for both desmogleins had a more severe and persistent phenotype. There was no significant association of sex, age, and localization of lesions with autoantibodies titers (Supplemental Table I; available at https://doi.org/10.17632/x9tty9shkp.2).

Yoshida and colleagues[1] first described cPV in a series of 4 patients who had a higher titer of Dsg1 compared with Dsg3. They proposed that an extended Dsg compensation hypothesis could explain this presentation. In most studies of cPV, the level of anti-Dsg1 was higher than that of Dsg3, but several reports are not explained by the compensation theory as a rule.

Further experimental studies have shown the coexistence of pathogenic and nonpathogenic epitopes of Dsg3 in murine models of PV.[3] Furthermore, Masmoudi and colleagues[4] proposed that the anti-Dsg3 antibodies in patients with cPV fail to recognize the main antigenic epitopes (EC1 and EC2). In a clinical study, it was shown that the pathogenic potential of autoantibodies differs between patients because of the mixed pathogenic and nonpathogenic forms of autoantibodies.[5]

cPV seems to be more frequent than previously reported. This type mainly presents with cutaneous lesions similar to the mucocutaneous type of disease. The desmoglein compensation theory cannot describe the clinical phenotype and anti-Dsg profiles of these patients. Pathogenic heterogeneity of anti-Dsg antibodies, as well as genetic factors, may be responsible for the presentation of PV with only cutaneous lesions. Further studies are needed to compare the features of cPV to those of mucocutaneous pemphigus.

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Efficacies and merits of the cotton swab technique for diagnosing tinea capitis in the pediatric population

To the Editor: Tinea capitis is the most common dermatophyte infection seen in childhood.[1] The current criterion standard for diagnosing tinea capitis is use of the scrape-culture method to isolate the causative agent.[2] Particularly for young patients, this procedure may be uncomfortable and is rather difficult for physicians to perform.

The cotton swab culture technique may be an efficient and effective way to obtain samples from pediatric patients in whom tinea capitis is suspected. To this date, only one published study has shown that the swab method is as effective as the traditional scrape method.[3] This study, however, was conducted 35 years ago and is not being referred to in clinical practice. We performed a prospective study comparing the efficacy of the swab culture method versus the scrape culture method in the diagnosis of tinea capitis.